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Manhattan Project II:  
To End the Threat of Nuclear War

The events of the last nine months have created conditions that make 1992, the fiftieth anniversary of the Manhattan Project, precisely the right time to launch Manhattan Project II. The task of the second Manhattan Project is, so far as possible and by the end of this century, to undo the legacy of the first: to reduce nuclear weapons to near zero and to free the earth from the danger of nuclear war.

The era of nuclear threats should end with the Cold War. But that is not what is happening today. One phase of the nuclear age--the period of superpower arms race and confrontation--has come to a close, but another phase may be about to accelerate: the era of nuclear proliferation.

The breakup of the former Soviet Union poses the possibility of a metastasis of nuclear expertise, materials, technology and finished weapons. With the disappearance of the Warsaw Pact, the danger of any crisis erupting into all-out global nuclear war has diminished drastically. But that very fact could reduce inhibitions against making or carrying out threats of nuclear attack in regional conflicts. The impending phase of new proliferation may actually increase the likelihood of accidents, nuclear terrorism, or limited nuclear wars, as between India and Pakistan, or a "Yugoslavia with nukes" within the former Soviet Union.

To avert such catastrophes, fundamental change is demanded in a number of policies of the United States and other nuclear powers. But a long drawn-out, piecemeal approach to change, picking out one or two issues at a time for priority in lobbying, is unlikely to have much effect on the proliferation process that is now close at hand. What is required is a dramatic and comprehensive package of coordinated changes in policies and programs, expressing the desire of our society and government to make a decisive shift in our relation to nuclear weapons.

To design and implement such a package calls for discussion and analysis, agreement on priorities, and assignment of tasks and schedules. It will take a focused effort of the highest urgency. The main precedent for that kind of effort in the United States is the very one that launched the nuclear era exactly half a century ago, the original Manhattan Project.

Then the time pressure came from the prospect of a Nazi bomb. Now, as the example of the Iraqi program warns, the alternative to

a successful Manhattan Project II may be a global profusion of Manhattan Project I's.

No new effort can uninvent nuclear weapons. It cannot surely prevent a later resumption of a nuclear arms race; even physical elimination of all weapons in national stockpiles could not assure that. But these truisms do not mean that anything remotely like the existing arsenals, threatened uses or levels of danger should be tolerated any longer.

Eliminating nuclear weapons as instruments of foreign policy and achieving near-abolition of nuclear arsenals are appropriate goals for the end of this century. They would substantially end the era of nuclear danger, whether or not total abolition proves ultimately attainable. Radical, decisive transformations in both these directions could start this year. They are essential to averting proliferation and to reducing to near-zero the risk of nuclear explosions.

In the longer run, is total abolition of nuclear weapons clearly feasible, in the broadest practical sense? It seems too soon reliably to answer that question. Therefore it is too early to take abolition as an immediate goal, one that defines the project and measures its success. But it is not too early to be addressing the question seriously. From the outset, the long-run tasks of the project must include an effort to explore the conditions that could make a world of zero nuclear weapons feasible. One of the stages in such a process might involve international control of residual nuclear devices, and perhaps of all aspects of the nuclear cycle. However, long before the conditions for total elimination can be met or even agreed upon, other goals of the utmost importance are clearly attainable, if the political will can be organized. These must be the main focus of this project.

In contrast to the original, the new project would need to be overt and international, including Third World participants. While some countries might collaborate in the effort at a high governmental level from the outset, the participation of others, including the United States, initially would have to be organized outside of government. This is true despite the momentum of the reciprocal measures of disarmament admirably initiated by President Bush with his unilateral moves of September 27, 1991 and joined by Presidents Gorbachev and Yeltsin and other leaders of what is now the Commonwealth of Independent States. Welcome as they are, none of their steps and proposals, particularly on the U.S. side, shows a decisive shift away from Cold War notions of the broad functions of and requirements for nuclear weapons in "superpower" arsenals. None adopts an appropriate posture from which to discourage proliferation.

Indeed, US policies persist that have long tended to encourage proliferation. The U.S. continues to test nuclear warheads, insists on its freedom to make first-use threats or to initiate nuclear attacks, and proposes to maintain nuclear "superiority"



indefinitely with a grossly excessive arsenal of thousands of warheads. With such a posture the U.S. is in no position to ask any other countries to forego nuclear weapons altogether, ask other nuclear states to restrain their buildup or use of threats, or expect adequate international collaboration on enforcement.

The current "supply side" approach to curtailing proliferation, trying to close off all technological access to nuclear weapons, cannot succeed by itself. Manhattan Project II must seek changes in these official U.S. nuclear policies that now increase the demand for nuclear weapons and the apparent legitimacy of large nuclear arsenals. A number of these changes must rest on a new way of thinking about nuclear weapons, among American officials and citizens.

Above all, the American government must come to accept that if there is one legitimate function for nuclear weapons it is only to deter nuclear attack. As a corollary, the United States should join the Commonwealth of Independent States and nearly all of the non-nuclear states of the world<sup>2</sup> in renouncing threats to initiate nuclear attacks--threats of "first use"--along with the implementation of such threats as illegitimate under any circumstances.

These two restrictions on the functions of nuclear weapons imply a force posture traditionally described as "minimum deterrence." Dr. Herbert York, in a talk at the Lawrence Livermore Nuclear Weapons Laboratory of which he was the first Director, has argued plausibly that the number of survivable weapons needed to deter the kind of adversary who can be deterred at all is very far below the level of 1000 frequently mentioned, "somewhere in the range of 1, 10, or 100," and "closer to 1 than it is to 100."<sup>3</sup>

Nuclear weapons not needed for this single purpose of deterring nuclear attack should be eliminated from the arsenals of all nuclear states, starting with the United States and Russia. By various reasonable estimates that means force reduction by more than 95% of the U.S. and Commonwealth stockpiles, or by Dr. York's standard, over 99%.

Implementing practical solutions and programs for freeing the world from nuclear threats and ridding it of nearly all of its nuclear weapons has more varied dimensions than the original project. It is the very complexity of these tasks, along with their importance and urgency, that suggests the model of the Manhattan Project, even though the obstacles in this case are more psychological and political than technological. The challenge is to gain Presidential, Congressional and bureaucratic commitment to near-abolition of nuclear arms and to other changes needed to make opposition to proliferation effective. The latter include accepting reciprocity of inspection and international controls, and U.S. willingness to forego first-use threats and the superior

status of nuclear superpower. It will take more to win official support than the equivalent of an Einstein-Szilard letter to President Roosevelt. There is no time to lose.

### Manhattan Project II: Staged aims and timeline

What might an overall staged timetable look like? The original project of 1942--after an earlier gestation period of three years--designed and delivered a bomb in three more years. The following proposed schedule of successive targets exemplifies the kind of planning and recommendations the new project might produce. The first deadline focusses on changes in U.S. policy, necessary for generalization to all nuclear states by 1995, with programs to fulfill these goals to be completed by the third target date, the end of the decade.

#### By End-1993:

Within an initial target date of one year into a new Presidential term, the U.S. government should:

- end nuclear testing: join the Commonwealth in a moratorium on nuclear testing while negotiating a permanent Comprehensive Test Ban Treaty; or as a less-preferable alternative, commit itself to end testing permanently by 1995 after a limited number of tests--under ten--for safety purposes only;

- adopt the principles of minimum deterrence and no-first-use of nuclear weapons; reject in principle and practice the use of nuclear weapons as an instrument of policy or warfare, restricting remaining devices--in minimal numbers, survivable but non-alert, separated physically and organizationally from regular military commands and forces--to the single function of deterring nuclear attack;

- commit itself to disable and dismantle--not merely withdraw from deployment--all tactical nuclear weapons, air-launched as well as sea- and land-based, by the end of the decade;

- commit itself not to reopen the production of weapons-grade fissionable materials, and to put under international safeguards fissile materials recovered from warheads dismantled in the reduction process;

- commit itself to adhere to the provisions of the Anti-Ballistic Missile treaty, narrowly interpreted;

- eliminate multiple-warhead (MIRVd) land-based missiles and existing silo-busting sub-based warheads and seek a mutual interim ceiling on total U.S. and Russian strategic weapons of no more than



1000 warheads, preferably 500 or 100, to be achieved by the end of the decade;

--propose the registration and tagging of all nuclear weapons in the world, including those of the United States; setting a model for reciprocal transparency, U.S. facilities should be made open to the same international verification and monitoring procedures for disarmament and dismantling measures that should be expected of the Commonwealth republics and other nuclear states.

The three-year period of the original project suggests the next target date; it would bring us to 1995, the fiftieth anniversary of the Alamogordo test and the bombing of Hiroshima, the first demonstrations of nuclear destruction. 1995 is also the year of the Non-Proliferation Treaty renewal conference, which could be the beginning of the end of the formal nonproliferation regime if the programs above and below are not achieved.

By August, 1995:

Mid-1995 should be the deadline for all the nuclear states of the world to:

--end nuclear testing permanently and sign a CTB;

--end production of weapons-grade fissile material;

--adopt the principles of minimum deterrence and no-first-use of nuclear weapons;

--commit to abolish tactical weapons, to be totally dismantled by 2000;

--commit to reduce strategic warheads to 500 at most and preferably 100 or less in any nuclear state, by 2000;

--along with all other nations, adhere to the Non-Proliferation Treaty and to a greatly strengthened anti-proliferation regime.

By 2000:

The fulfillment of these goals by the end of the decade will substantially end the era of nuclear threats with the millenium.

## END-NOTES

1. Daniel Ellsberg, a former State and Defense Department official and Rand Corporation consultant to the Defense Department on nuclear war planning, is a senior research associate of the Center for Psychological Studies in the Nuclear Age at Harvard Medical School. He is devoting his full time to bringing about Manhattan Project II, and he welcomes any comments or suggestions on this effort from readers, in particular from participants in the original Manhattan Project.

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2. On December 9, 1981, 82 nations voted in favor of UN Resolution 36100, the Declaration on the Prevention of Nuclear Catastrophe, whose preamble declares, "Any doctrine allowing the first use of nuclear weapons...[is] incompatible with human moral standards and the lofty ideals of the UN." The body of the text resolves: "States and statesmen that resort first to nuclear weapons will be committing the gravest crime against humanity. There will never be any justification or pardon for statesmen who take the decision to be the first to use nuclear weapons." 19 nations opposed this resolution, including the United States and most NATO member nations.

The 11 republics of the Commonwealth of Independent States committed themselves to the principle of "no first use" in their founding document in December, 1991.

3. "'Remarks about Minimum Deterrence," Lawrence Livermore National Laboratory, CTW-12-90, January 25, 1991.